SERVICE QUALITY AND CUSTOMER SATISFACTION OF E-COMMERCE WEBSITES: ANALYSIS AND MEASUREMENT

A Synopsis of research work

In pursuance of the requirements for the degree of

DOCTOR OF PHILOSOPHY

In

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SUBMITTED BY

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UNDER THE SUPERVISION OF

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SECTON 1: INTRODUCTION

India is the rapidly growing market for the E-commerce sector with the e-commerce market, which is expected to grow approx. 1,200 per cent by 2026. Online shoppers in India are expected to reach 220 million by 2025. Indian E-commerce industry has been on an upward growth direction and is expected to become the second largest E-commerce market in the world by 2034 exceeding US economy. India's internet economy is expected to double from US$125 billion as of April 2017 to US$ 250 billion by 2020, majorly from E-commerce (Source: IBEF Report 2019).

1.1 E-Commerce Industry

Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail. Typical e-commerce transactions include the purchase of online books (such as Amazon) and music purchases (music download in the form of digital distribution such as iTunes Store), and to a less extent, customized/personalized online liquor store inventory services (Source: Statista Report 2016).

There are three areas of e-commerce: online retailing, electronic markets, and online auctions. E-commerce is supported by electronic business.

In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorized distributors and e-commerce offerings. In 2017, the largest e-commerce companies in India were Flipkart, Amazon, Myntra, Paytm, and Snapdeal (Source: The Economic Times Article 2017)

Report from business wire mentioned that much of the further increase in online sales through 2020 will originate in India's rural regions and second tier cities. Flipkart and Amazon, India's two largest online sellers, are investing in infrastructure to nurture and profit from this growth segment outside the major

cities. The report cites efforts of global online merchant Alibaba to expand in India through investments in payment provider Paytm and online grocer BigBasket.

Purchases through smartphones and the melding of online/in-store purchases are growing trends in Indian E-Commerce. The product categories most purchased online in India are mobile phones with their accessories and apparel, while the grocery category is seeing rapid expansion (Source: Business wire report 2018).

1.1.1 Impact on marketers and retailers

E-commerce markets are growing at noticeable rates. The online market is expected to grow by 56% in 2015–2020. In 2017, retail e-commerce sales worldwide amounted to 2.3 trillion US dollars and e-retail revenues are projected to grow to 4.88 trillion US dollars in 2021. Traditional markets are only expected 2% growth during the same time. Li, Zhaolin (2015) Brick and mortar retailers are struggling because of online retailer's ability to offer lower prices and higher efficiency. Many larger retailers are able to maintain a presence offline and online by linking physical and online offerings (Source: Statista report 2016).

1.1.2 Impact on supply chain management

For a long time, companies had been troubled by the gap between the benefits which supply chain technology has and the solutions to deliver those benefits. However, the emergence of e-commerce has provided a more practical and effective way of delivering the benefits of the new supply chain technologies.

Delia (2008) E-commerce has the capability to integrate all inter-company and intra-company functions, meaning that the three flows (physical flow, financial flow and information flow) of the supply chain could be also affected by e-commerce. In addition, e-commerce has a more sophisticated level of impact on supply chains: Firstly, the performance gap will be eliminated since companies can identify gaps between different levels of supply chains by electronic means of solutions; Secondly, as a result of e-commerce emergence, new capabilities such implementing ERP systems.

1.1.3 Impact on employment

Teriz (2011) E-commerce helps create new job opportunities due to information related services, software app and digital products. It also causes job losses. The areas with the greatest predicted job-loss are retail, postal, and travel agencies. The development of e-commerce will create jobs that require highly skilled workers to manage large amounts of information, customer demands, and production processes.

1.1.4 Impact on customers

Evans (2002) E-commerce brings convenience for customers as they do not have to leave home and only need to browse website online, especially for buying the products which are not sold in nearby shops. It could help customers buy wider range of products and save customers' time. Consumers also gain power through online shopping. They are able to research products and compare prices among retailers. Moreover, e-commerce provides products' detailed information; even the in-store staff cannot offer such detailed explanation. Customers can also review and track the order history online.

1.2 Major Ecommerce Business Classifications

Electronic commerce encompasses all online marketplaces that connect buyers and sellers. The internet is used to process all electronic transactions.

1.2.1 B2B Ecommerce

A B2B model focuses on providing products from one business to another**.** While many ecommerce businesses in this niche are service providers, you'll find software companies, office furniture and supply companies, document hosting companies, and numerous other ecommerce business models under this heading

1.2.2 B2C Ecommerce

The B2C sector is what most people think of when they imagine an ecommerce business. This is the deepest ecommerce market, and many of the names you'll see here are known quantities offline, too. B2C sales are the traditional retail model, where a business sells to individuals**,** but business is conducted online as opposed to in a physical store

1.2.3 C2C Ecommerce

Created by the rise of the ecommerce sector and growing consumer confidence in online sales, these sites allow customers to trade, buy, and sell items in exchange for a small commission paid to the site. Opening a C2C site takes careful planning.

1.2.4 C2B Ecommerce

C2B is another model most people do not immediately think of, but that is growing in prevalence. This type of online commerce business is when the consumer sells goods or services to businesses, and is roughly equivalent to a sole proprietorship serving a larger business

1.2.5 Government / Public Administration Ecommerce

The models listed above are the primary ecommerce retail structures, but they aren't the only ones. Other types of ecommerce involve government/public administration conducting ecommerce transactions with businesses or consumers.

B2G (also called B2A), for businesses whose sole clients are governments or type of public administration. One example is Synergetics Inc. in Ft. Collins, Colorado, which provides contractors and services for government agencies.

C2G (also called C2A): typically individuals paying the government for taxes or tuition to universities.

1.3 Selected E-Commerce B2C business model

In B2C model, a business website is a place where all the transactions take place directly between a business organization and a consumer.

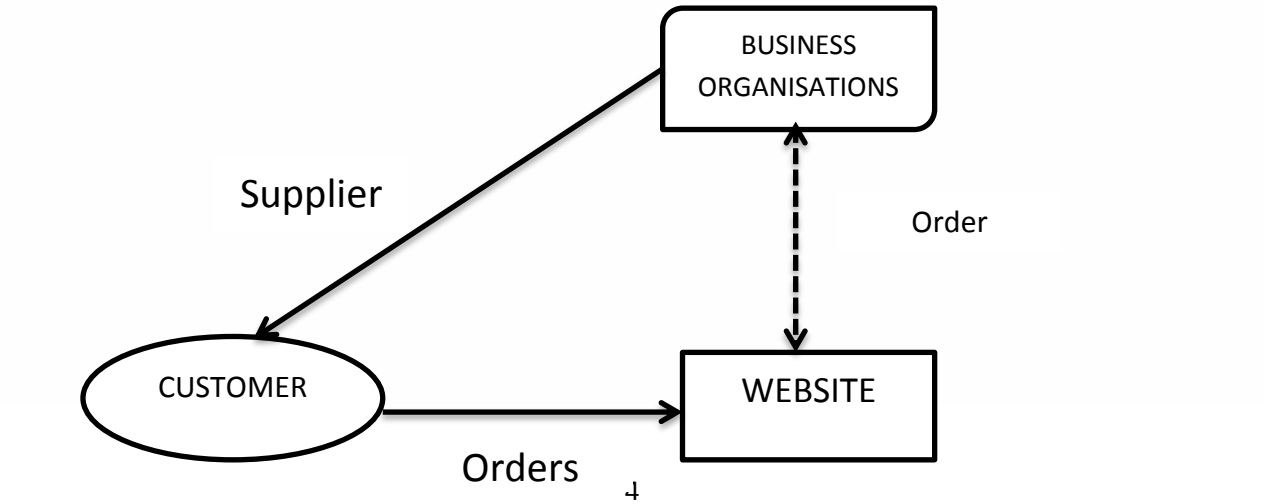

Fig. 1 E-Commerce B2C Direct seller business model (Source: Researcher's own construction)

In the B2C model, a consumer goes to the website, selects a catalog, orders the catalog, and an email is sent to the business organization. After receiving the order, goods are dispatched to the customer.

1.3.1 Top E-Commerce Websites (As per online retail sales 2017)

- Alibaba Group Holding
- Flipkart Online Services
- Amazon Seller Services
- Paytm mall solution

(Source: Report by eMarketer, Kalaari Capital – Imagining Trillion Dollar India)

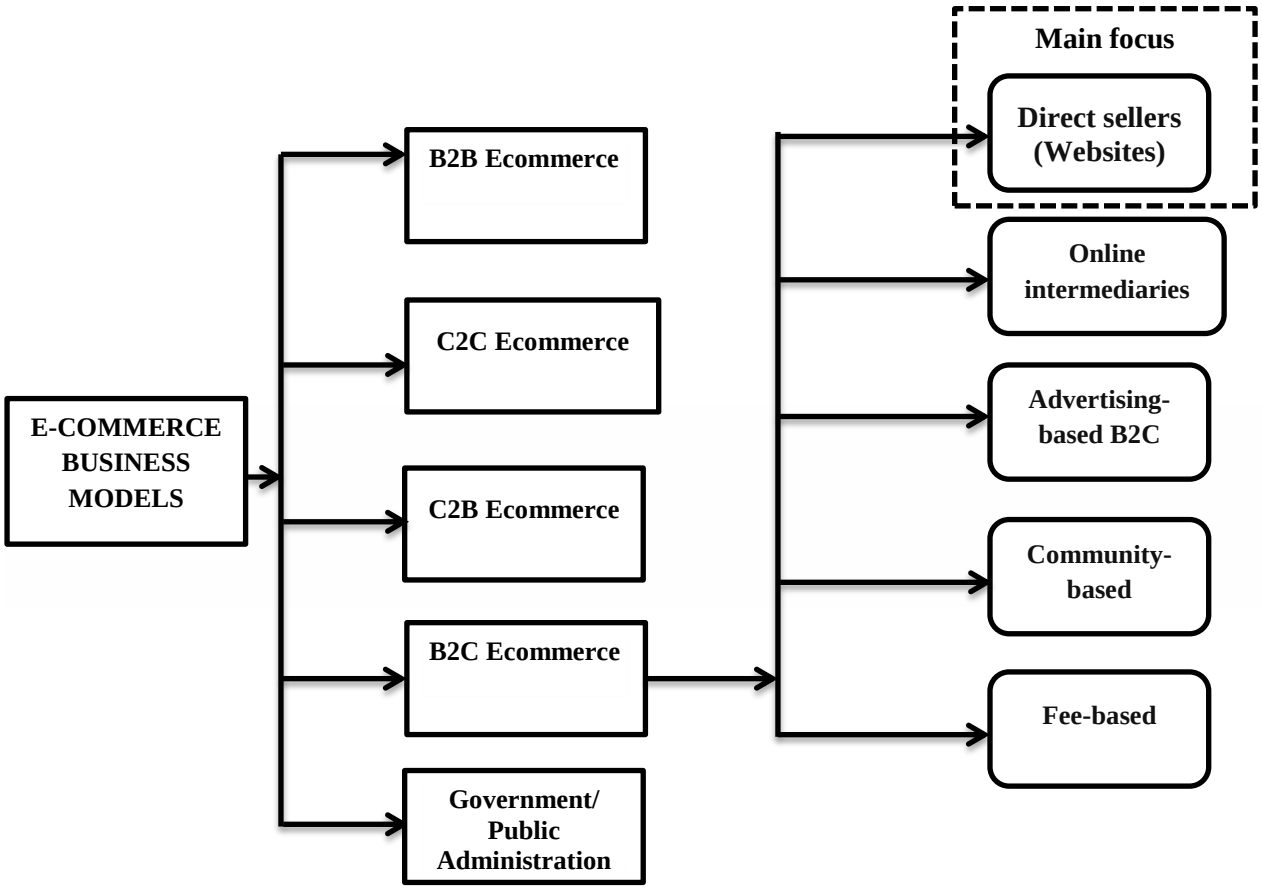

Fig. 2 E-Commerce business models Classification (Source: Researcher's own

According to the figure, the main focus of the study will be limited to direct selling companies (Websites) out of various E-commerce B2C business classifications model. Companies such as Flipkart, Amazon, Myntra Jabong etc

1.4 E-SERVQUAL

Parasuraman *et al*., (1988) view service quality evaluation by the customers about their expectations of the services received by a particular service provider. While Santos (2003) defined E-commerce service quality as the evaluations from the actual experience of the service in terms of excellence and quality of the E-commerce service delivery in the online market.

Bansal and singla (2013) proposed that organization can only survive in this competitive environment if they are able to provide best service quality to their customers, making service as key factor in the success of any organization. However two third of all the electronic stores are not able to achieve profitability. The biggest reason for this unprofitability is attributed to an important construct that has gained research attention known as e-service quality. To measure and improve the performance, E-SERVQUAL instrument has been developed. This E-SERVQUAL instrument has received wide acceptance across different industries.

Bitner et al. (1990) defined service quality as the customers' overall impression of the relative inferiority/superiority of a service provider and its services and are often considered similar to the customer's overall attitude towards the company.

The beliefs of the E-commerce websites are influenced by the notion of privacy by based customers on how organizations control their personal data. Privacy is the most serious issue in attracting more online potential customers and retains current customers (Park and Kim, 2003).

However, since the e-business is a new industry and its development brings the innovation and reform from firm level to organization level, even to the whole macroeconomic environment, different researches explore the key factors affecting e-business economic performance from different perspectives. Some consider that the website design is a critical aspect of e-business strategy and plays an important role in

attracting and retaining customers (Cao and Zhang, 2005). A high-quality website not only brings the huge web traffic but also affects the customers' purchasing decision (Liang and lin, 2002) .

The five dimensions of service quality in SERVQUAL with online service quality: Tangibles; Responsiveness ; Reliability; Assurance; and Empathy.

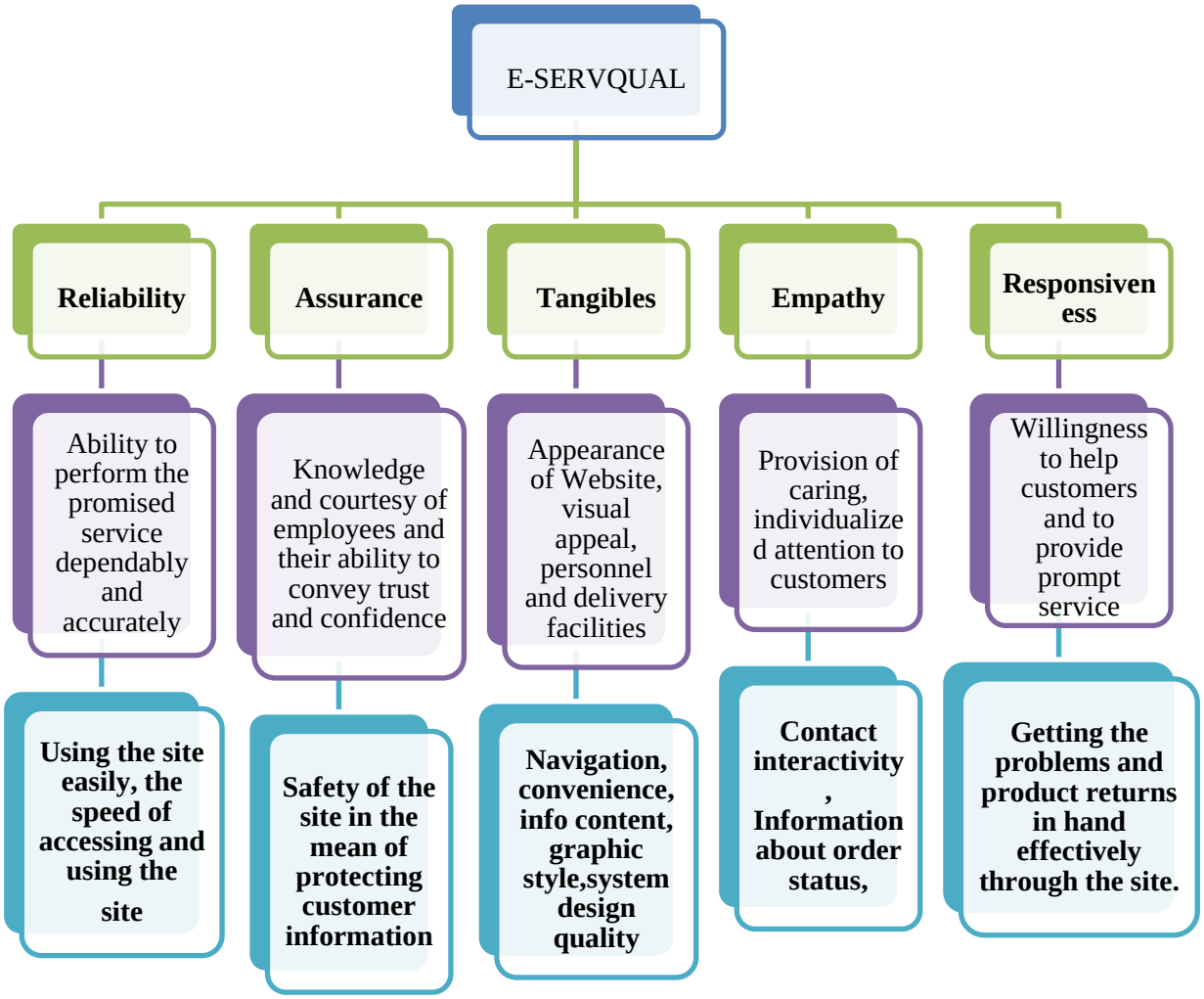
E-SERVQUAL
Reliability
Assurance
Tangibles
Empathy
Responsiveness
Ability to perform the promised service dependably and accurately
Knowledge and courtesy of employees and their ability to convey trust and confidence
Appearance of Website, visual appeal, personnel and delivery facilities
Provision of caring, individualized attention to customers
Willingness to help customers and to provide prompt service
Using the site easily, the speed of accessing and using the site
Safety of the site in the mean of protecting customer information
Navigation, convenience, info content, graphic style,system design quality
Contact interactivity , Information about order status,
Getting the problems and product returns in hand effectively through the site.

Fig. 3 E-SERVQUAL 5 DIMENSIONS (Source: As per the literary sources)

1.5 Customer satisfaction

It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds

specified satisfaction goals (Paul and Phillip 2010). Customer satisfaction is exactly how the customer satisfaction offered by the service. It has a close relationship with personal beliefs (Greyskens *et al*., 1996). Zins (2001), also states that loyalty can be developed through high level of customer satisfaction. But according to Fisher (2001), customer satisfaction is only one reason, and is not an important reason why the customers will switch to other service or product. There have been several studies on the dimensions (or components) of service quality in e-commerce settings.

The objective of this study is to gain insights on E-service quality (E-SERVQUAL) and its significance in measuring service quality and customer satisfaction by genuine customer response and large data sample through survey in the two cities of northern India. It should be noted that e-commerce/e-business quoted companies in this sample only refer to the pure dot com companies rather than those companies with e-business application in a part of business. The reason why choose E-Commerce website is Indian ecommerce market scale is expected to reach US$ 200 billion by 2026 from US$ 38.5 billion in 2017 (Source: IBEF report 2019).

This study contributes to the current body of knowledge by improving understanding of the main issues relating to E-SERVQUAL and its significance in measuring service quality and customer satisfaction in this new online context. The proposed model can guide the formulation of marketing strategies, relating to the service quality of websites, which have the potential to achieve high levels of customer satisfaction and financial performance.

This study can be used for e-commerce Website operators wishing to enhance the competitiveness of their Websites in the highly competitive online market.

SECTION 2: LITERATURE REVIEW

A review of literature was performed to understand the broad concept of Service Quality and Customer Satisfaction of ecommerce websites: Analysis and Measurement. A summary of the literature reviewed under the given classification has been exhibited in Table 1 at the end of this section.

The picture of today's highly competitive and globalized services markets is one of limited differentiation possibilities regarding the core products being offered. This has led service providers to look for other means to obtain competitive advantage. A predominant role in this pursuit is the effort to provide services of high quality (Burton, 1994). Significant research has been reported in the literature aiming to conceptualize and measure service quality. The most prominent instrument for service quality measurement among researchers, practitioners and managers is SERVQUAL (Parasuraman et al., 1985, 1988, 1991, 1994). It has been employed in various service settings and has produced substantial results despite adversary views.

Quality of product or service information can be defined as customers' perception on quality of service or product information supplied on the website (Park & Kim, 2003). Quality website content should be questioned because it is a way to give credibility to E-customer (Mustafa, 2011 and Mcknight *et al*., 2002). Park and Kim, (2003), also found that the quality of information straightly affect customer satisfaction. Cyr (2008) found that culture also plays a role in the quality of information for customer satisfaction.

Ba & Johansson (2008) explored that as the electronic service delivery system process improves, a customer's perception of the website's ease of use increases, leading to increased service value and perceived control over the process, which increases customer satisfaction. The research provides evidence that the technological capabilities embedded in the website processes are an important factor in determining service quality and ultimately online customer satisfaction. The notion of security response depends on the reliability of the method of payment and the manner of the transfer and storage of data, (Kolsaker and Payne, 2002).

Thus, customers are of the opinion that "Online Service Quality" is a crucial factor for the success of internet-based services (Hirmukhe, 2013). It was found that the service quality brings about a greater degree of perceived satisfaction resulting in its adoption (Zhang and Prybutok, 2005). Since organizations are totally dependent on the internet for providing services over online portals and hence websites act as a

pivotal media for communication (Khan and Ahmed, 2013), online service quality becomes even more crucial.

Across all ages, various researchers have studied the characteristics which have contributed very significantly in assessing the quality of services. (Agrawal *et al*., 2012; Gronroos, 1983).

Parasuraman *et al.* (1988) have identified five attributes constituting the global measurement device of service quality, SERVQUAL. As per Zeithemal *et al.* (2002) SERVQUAL is inadequate to calibrate the service quality for online dependent organizations.

Yang and Jun (2002) reported five quality components which are used extensively by service providers: reliability, ease of use, personalization, security and credibility. This conclusion is based on the sample obtained from online users and conventional users. Cai and Jun (2003) pointed out that website design/content, trustworthiness; prompt/reliable service and communication are the main dimensions of online service quality.

Additional research was conducted in order to provide insights about the criteria that are relevant for evaluating online service quality resulting in the E-SERVQUAL – a multiple parameter scale to measure service quality. This is developed by Parasuraman *et al.* (2005).

Even the industry analysis showed that with growing internet penetration, internet users in India are expected to increase from 445.96 million in 2017 to 829 million by 2021. As of December 2018, internet subscribers in India stood at 604.21 million people. Each month, India is adding approximately 10 million daily active internet users to the internet community supporting the ecommerce industry which is the highest rate in the world. The recent rise in digital literacy has led to an influx of investment in E-commerce firms, levelling the market for new players to set up their base, while churn out innovative patterns to disrupt old functioning (Source: IBEF report 2018).

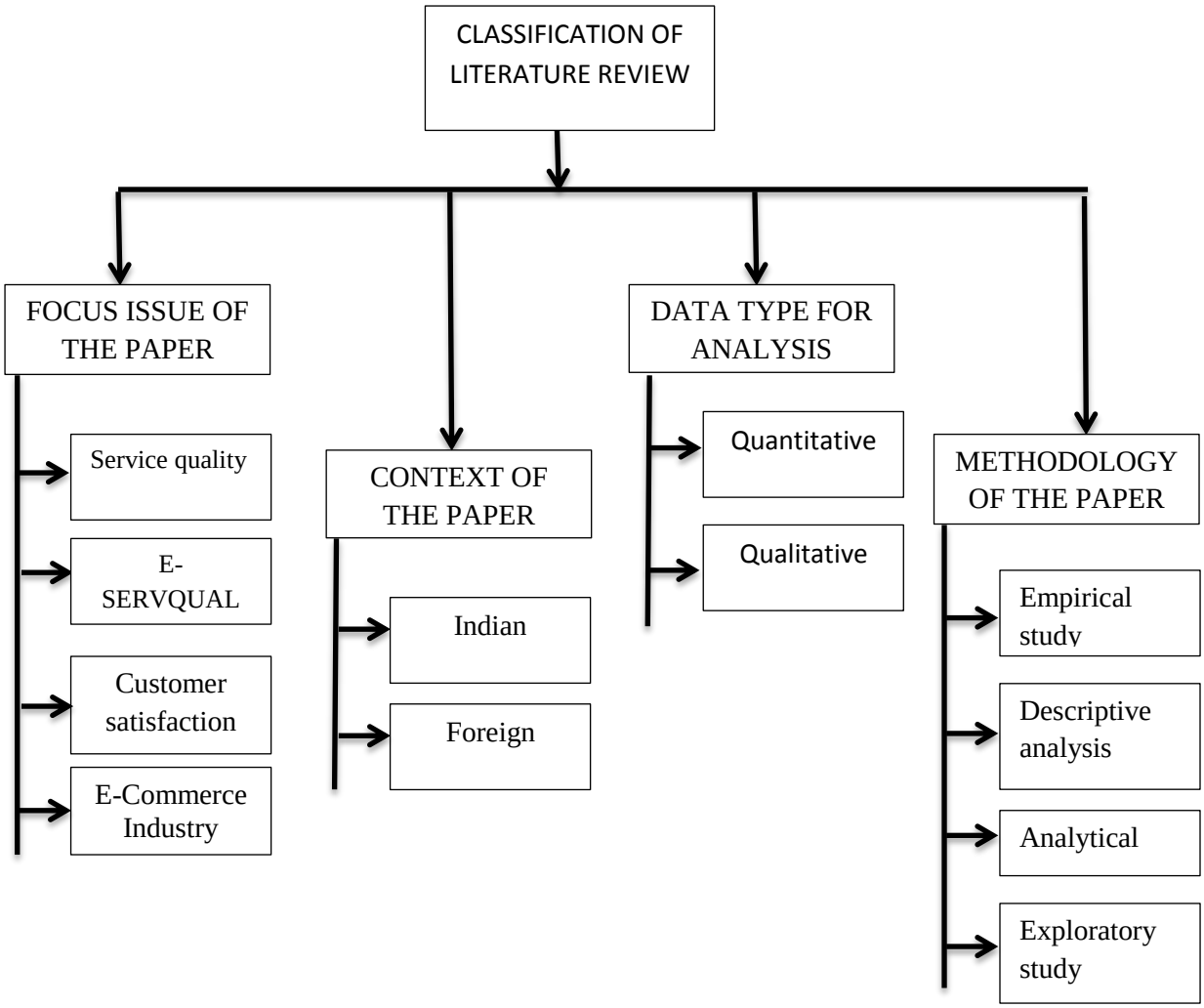

Fig. 4 Classification of Literature Review (Source: Researcher's own

Table 1 Summary of Literature Review														
S NO.	**Title Author(s) (Year)**	**Category**	**Focus Issue**				**Context**		**Data Type**		**Methodology**			
			Service quality	**E-SERVQUAL**	**Customer satisfaction**	**E-Commerce sector**	**Indian**	**Foreign**	**Qualitative**	**Quantitative**	**Empirical**	**Descriptive**	**Analytical**	**Exploratory**
1	Measuring E-Commerce Website Success 19th Australasian Conference on Information Systems Ahmad Ghandour,KennethDeans,GeorgeBenwell,PaulPillai (2008)	Research paper		✔				✔	✔		✔			
2	Measuring E-Commerce Web Site Quality: An Empirical Examination Mei Cao,QingyuZhang,JohnSeydel (2004)	Research article	✔	✔				✔		✔	✔			
3	Perception of service quality in eCommerceAtanuNath Liu Zheng (2004)	Research paper	✔	✔				✔		✔			✔	
4	A Study on WebQual and its Usefulness for Measuring Quality of E-Commerce Websites Sai Kumar. E,Haripriya.V (2016)	Research paper	✔			✔	✔			✔		✔		
5	An Exploratory Study of the Impact of e-Service Process on Online Customer Satisfaction SulinBa,Wayne C. Johansson (2008)	Research paper			✔	✔		✔		✔				✔
6	SERVQUAL – A Multiple Item Scale For Measuring Consumer perceptions of Service Quality A Parasuraman , Valarie, Leonard (1988)	Research Paper	✔			✔		✔		✔			✔	
7	A Study on Website Quality Models R.Anusha(2014)	Research Article	✔				✔		✔		✔			

8	Website Quality and Profitability Evaluation in Ecommerce Firms Using Two-stage DEA Model ZhuoFanYanga, Yong Shib, Bo Wanga ,Hong Yan (2014)	Research paper	✔			✔		✔		✔		✔		
9	How do Chinese and Saudi Customers Perceive Online Service Quality? A Comparative Study. habib ullah khan, mahmood a. awan and han chiang ho(2014)	Research Article	✔		✔	✔		✔		✔		✔		
10	Factors Influencing Customer Satisfaction and E-Loyalty: Online Shopping Environment among the Young Adults izyan hizza bt. hila ludin, boon liat cheng (2014)	Research Article			✔	✔		✔		✔		✔		
11	Conceptual framework	Article				✔			✔				✔	
12	Antecedents of consumer satisfaction from online shopping Shruti Jain (2018)	Research article			✔	✔	✔			✔				✔
13	Determinants of E- Commerce Customer Satisfaction , Trust , Loyalty in Suadi Arabia Mustafa I. Eid (2014)	Research Article			✔	✔		✔		✔		✔		
14	E- Commerce , Online Shopping and Customer Satisfaction , An Empirical Study On E-Commerce System in Dhaka SM FerojMahMood (2016)	Research Paper			✔	✔		✔		✔		✔		
15	E-Commerce Service Quality on Customer Satisfaction, Belief and Loyalty: A Proposal MutiaSobihah, MahadzirahMohamad ,Nor Azman Mat Ali ,Wan Zulqurnain Wan Ismail (2015)	Research Paper	✔	✔	✔			✔		✔		✔		
16	The effects of online service quality of e-commerce Websites on user satisfaction Gajendra Sharma Wang Lijuan(2015)	Research Paper	✔		✔	✔		✔		✔		✔		

17	Software Quality Assurance – E-commerce Customers Satisfaction in Requirements Engineering Process Wan Nurhayati Wan Ab. Rahman, Asma' Badrul Kamal, HazlianaTalha, Bunjo Josiah, LawalAdamu, Wu Liming and NurSakinahMohdRosli	Research Paper	✔		✔			✔		✔		✔		
18	Evaluation of E-commerce Website Quality Using Fuzzy Multi-criteria Decision Making Approach Serhat aydin, cengiz kahraman (2012)	Research Article	✔			✔		✔		✔	✔			
19	Internet service quality and customer satisfaction: Examining internet banking in Greece IliasSantouridisa, PanagiotisTrivellas and PanagiotisReklitis(2009)	Research Paper	✔	✔	✔			✔		✔	✔			
20	Measuring Service Quality in Internet Banking: The Case of Hong Kong Noel Yee-Man Siu, Jeremy Chi-WahMou (2005)	Research Paper	✔	✔	✔			✔		✔	✔			
21	Relationship between E- Commerce Service Quality, Satisfaction , Trust, Customer Loyalty in the Hotel Industry in the East Coast Of Peninsular Malaysia. A H MutiaSobihah, et al (2015)	Research Paper	✔	✔	✔			✔		✔		✔		
22	Measuring Customer Satisfaction on WebQual Dimension For Online Banking; An Empirical Study Dr. ShubhamGoswami(2013)	Research Article	✔		✔		✔			✔	✔			
23	Measuring e-Commerce service quality from online customer review using sentiment analysis PuspitaKencana Sari, et al (2018)	Case based research	✔	✔				✔		✔			✔	
24	E- Commerce IBEF Report (2019)	Report				✔	✔		✔				✔	
25	Measuring Customer Satisfaction In Internet Banking , Ziqi Liao and Michael Tow Cheung(2008)	Research Article	✔	✔	✔			✔		✔	✔			

26	Measuring e-Commerce service quality from online customer review using sentiment analysis Puspita Kencana Sari, Andry Alamsyah, Sulistyo Wibowo(2018)	Case based Research	✔		✔	✔		✔		✔	✔			
27	Examining the Factors of Customer Satisfaction from Takhfifan Website Hossein Vazifehdust, Mina Khalili(2017)	Research Paper			✔	✔		✔		✔			✔	
28	The Influence Of Quality on E-Commerce Success – An Empirical Applications Of The Delone And Mclean Is Success Model. Ultan Sharkey, Murray Scott, Dr. Tom Acton(2003)	Research paper	✔			✔		✔		✔	✔			
29	Relationship Marketing: Understanding Customer Satisfaction in Online Retailing of Chase Value Center Farah Gogan , Urooj Fatima ,Eesar Khan ,Aamir Hussain (2016)	Research Paper			✔	✔		✔		✔		✔		
30	Measuring Quality Of E- Commerce Web Sites – Case Of Lithuania Vida Davidavičienė, Jonas Tolvaišas(2011)	Research Paper	✔			✔		✔		✔			✔	
31	Customer Loyalty in e-Commerce Settings: An Empirical Study Norizan M. Kassim and Nor Asiah Abdullah(2008)	Research Paper	✔		✔	✔		✔		✔	✔			
32	Electronic Logistics Service Quality (e-LSQ): Its Impact on the Customer's Purchase Satisfaction and Retention Shashank Rao, Thomas J. Goldsby, Stanley E. Griffis, and Deepak Iyengar(2011)	Research Paper	✔		✔	✔		✔		✔			✔	
33	PEQUAL - E-commerce websites quality evaluation methodology Jarosław Wątróbski, Paweł Ziemba, Jarosław Jankowski, Waldemar Wolski (2016)	Research Article	✔			✔		✔		✔	✔			
34	E-Commerce Service Quality on Customer Satisfaction, Belief and Loyalty: A Proposal Mutia Sobihah Mahadzirah Mohamad Nor	Research Paper	✔		✔	✔		✔		✔		✔		

	Azman Mat Ali Wan Zulqurnain Wan Ismail(2015)													
35	The Electronic Service Quality Model: The Moderating Effect of Customer Self-Efficacy Youjae Yi,Taeshik Gong(2008)	Research Paper	✔	✔	✔			✔		✔	✔			
36	Framework for Evaluation of E-Commerce Websites Akriti Vyas , Aman Kumar Sharma(2017)	Research Paper	✔			✔	✔		✔					✔
37	Relationships between process quality, outcome quality, satisfaction, and behavioural intentions for online travel agencies – evidence from Taiwan Ching-Fu Chen, Ya-Ling Kao(2010)	Research Paper	✔		✔			✔		✔				✔
38	The Relationships among e-Service Quality, Value, Satisfaction and Loyalty in Online Shopping Hsin Chang, Hsin-Wei Wang(2008)	Research Article	✔	✔		✔		✔	✔			✔		
39	The Impact of Website Quality Dimensions on Customer Satisfaction in the B2C E-commerce Context Hsiu- Fen Lin(2007)	Research Paper	✔		✔	✔		✔		✔		✔		
40	Measuring Customers Satisfaction of E-Commerce Sites Using Clustering Techniques: Case Study of Nyazco Website Ali Rezaeian, Sajjad Shokouhyar, Fariba Dehghan(2016)	Research paper			✔	✔		✔		✔			✔	
41	Trust and Quality Assurance in Business-To-Consumer Electronic Commerce: Enhancing Consumer Acceptance and Participation Dat-Dao Nguyen , Glen L. Gray &Dennis S. Kira(2011)	Research Paper	✔			✔		✔	✔					✔
42	E- Customer Satisfaction In The E- Tailing Industry An Empirical Survey For Turkish E-Customers Dr. Süleyman BARUTÇU (2010)	Research Paper	✔		✔	✔		✔		✔	✔			

43	Measuring Internet Service Quality Of E-Commerce Web Sites By Using E-S-Qual Turkey Nevin Kortunay(2016)	Research Paper	✔	✔	✔	✔		✔		✔		✔		
44	Website Quality and Profitability Evaluation in Ecommerce Firms Using Two-stage DEA Model ZhuoFan Yanga, Yong Shib, Bo Wanga, Hong Yan(2014)	Research Paper	✔			✔		✔		✔			✔	
45	Online Service Quality and Brand Equity: The Mediational Roles of Perceived Value and Customer Satisfaction Amjad A. Abu Elsamen (2015)	Research Paper	✔		✔	✔		✔		✔			✔	
46	Factors influencing satisfaction And loyalty in online shopping: an Integrated model Grace t.r. Lin and chia-chi sun (2009)	Technical paper			✔	✔		✔		✔			✔	
47	Measuring quality perception in Electronic commerce: A possible segmentation in the Hungarian market Ildikó kemény (2016)	Research Paper	✔			✔		✔		✔		✔		
48	Relationships between system Quality, service quality, and Customer satisfaction M-commerce in the jordanian context Anas abdelsatar mohammad salameh (2018)	Research Paper	✔		✔			✔		✔		✔		
49	The effect of e-service quality on Jordanian student's e-loyalty: an Empirical study in online retailing Rami mohammad al-dweeri (2018)	Research Paper	✔	✔		✔		✔		✔		✔		
50	Using E-S-QUAL to Measure Internet Service Quality of ecommerce Web Sites in Greece Ilias santouridis, panagiotis trivellas (2012)	Research Paper	✔	✔	✔	✔		✔	✔			✔	✔	
51	Measuring service quality: A Reexamination and Extension Joseph croin and Steven taylor (1992)	Research Paper	✔	✔	✔	✔		✔	✔			✔		

2.2 Research gap

Numerous researches have examined the effect of service quality on customer satisfaction, customer loyalty and various other parameters in foreign context. The e-commerce Website has been identified as having a significant impact on business activities in solving the geographical problem. A number of performance problems have been observed for e-commerce Websites, and much work has gone into characterizing the performance of web-servers and Internet applications. For any E-commerce website, quality is the most important issue and significant performance indicator. Literature review suggests that measuring service quality and customer satisfaction of E-commerce websites is rapidly emerging in a global context. However, little is available in the literature about service quality and customer satisfaction of e-commerce websites in Indian context, till now, relatively less research has been done in the same field. The focus of most of the researchers is on perception on online shopping and reviews on various web-Qual models. Thus, separate focus is required on the quality perspective of E-commerce websites and its effect on its revenue and overall financial performance as there is no grading firm or rating agency for quality assurance of the websites. Websites with a specific set of features are created to attract users for the purpose of exchanging values. In addition, online users voluntarily visit the site, and the site's organization responds to their queries and communicates based on a set of quality factors for a positive customer experience but no such research have been conducted so far for business to customer segment in India. A diversified economic, educational and social level research on customer satisfaction from service quality is going to be beneficial for quality controllers, customers and practitioners, besides contributing to the extant literature.

Section 3: Conceptual framework and hypotheses

In this section a conceptual framework is proposed depicting measuring service quality and customer satisfaction of e-commerce websites: analysis and measurement. The study intends to explore and examine the effect of service quality in detail.

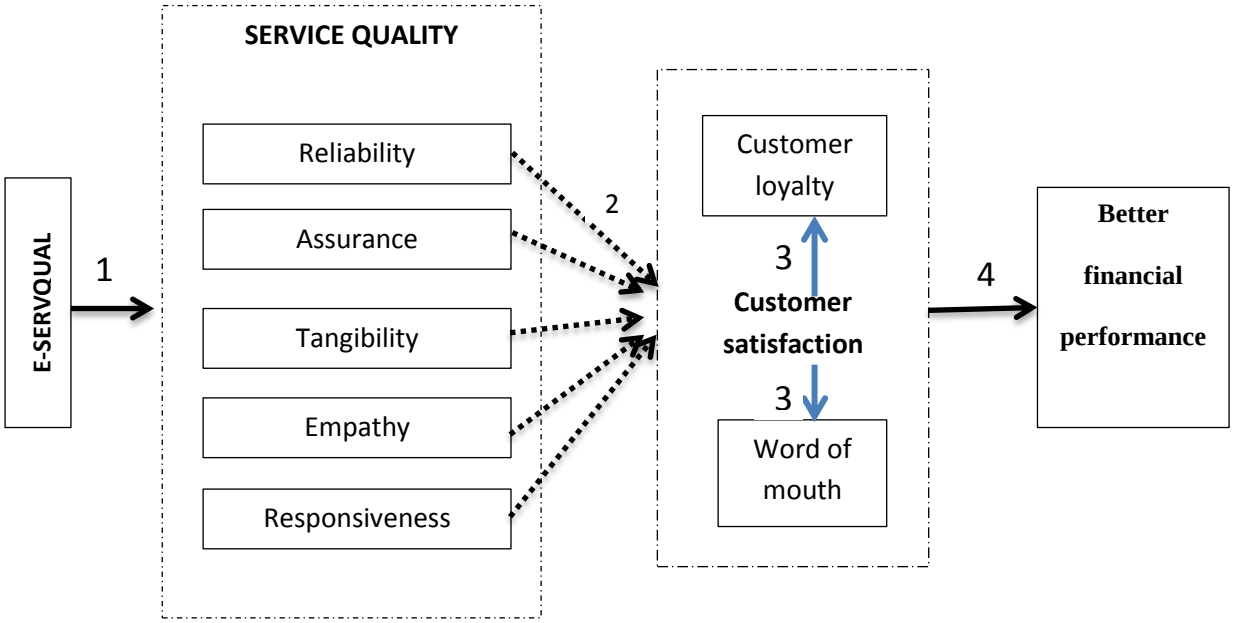

Fig. 5 Conceptual framework (Source: Researcher's own construction)

In essence, the framework in Figure 5 suggests four primary links between the constructs involved in E-SERVQUAL model and its significance for measuring service quality and customer satisfaction of E-Commerce website derived from the literature as discussed above. The first link suggests the components of ESERVQUAL framework derived from various literature. The second link suggests separate relative effects of different E- service quality dimensions on customers' satisfaction. The third link is that customer loyalty and word of mouth is considered as an outcome of customer satisfaction. The fourth link proposed that customer satisfaction, customer loyalty and word of mouth are antecedents of better financial performance. These four links are important because they suggest how customer satisfaction, how the dimension-specific of service quality dimensions can shape this construction and their relationship in the e-commerce service settings. These links will be examined in turn.

The first and second link depicts five dimensions of service quality in modeling the customer satisfaction process. Consider the satisfaction process first. Overall satisfaction with a service is a result of a complex process involving the interrelationships between many dimensions.

H01a: Reliability is not related to customer satisfaction.

H01b: Assurance is not related to customer satisfaction.

H01c: Tangibility is not related to customer satisfaction.

H01d: Empathy is not related to customer satisfaction.

H01e: Responsiveness is not related to customer satisfaction.

The third link depicts the customer loyalty and word of mouth derived from customer satisfaction. As many researchers, Moreno et al. (2018), Chang et al. (2010), Kassim et al. (2008) argued that these can also be important causal driver of customer satisfaction from Service quality.

H02: Customer satisfaction derived from service quality is not related to customer loyalty.

H03: Customer satisfaction derived from service quality is not related to word of mouth.

The fourth link suggests that the overall E-SERVQUAL dimensions and customer satisfaction further leads to better financial performance. Which has been least explored in previous researches. And Researcher wants to know the relation between both of them.

H04: Customer satisfaction is not related to better financial performance.

Without an understanding of the potential effects of individual dimensions such as city, it will be difficult for managers to design or operate their service processes effectively other than through estimation. This explanation appears to be applied in e-commerce settings as well.

Although the framework presented in this section shares element of other customer satisfaction, this one differs from the current literature in two aspects. First this framework seeks to depict the effects of E-SERVQUAL to measure service quality and these effects are barely shown in other models in Indian context. This inclusion is justified because this is the main focus of this research. Secondly it seeks to measure effect of customer satisfaction on financial performance separately.

List of Dimensions of E-SERVQUAL

1. Tangibles

   Website design

   Website's search function

   Navigation,

   Convenience,

Updated content

2. Reliability-

   Fund transaction.

   Accessing speed.

3. Assurance

   Protecting customer information

   Privacy in payment.

4. Empathy-

   Contact interactivity,

   Order Tracking

   Order processing

5. Responsiveness-

   Promptness in customer enquiry

   After sales services,

   Product return handling,

   Grievance handling

SECTION 4: NEED OF THE STUDY

E-commerce is considered an excellent alternative for individuals and companies to reach new customers and service quality delivery through internet, which is an essential strategy to success, more important than price and web presence. Firstly, this have been least explored by Indian researchers with respect to Indian ecommerce industry. Secondly, the focus of most of the researchers is on perception on online shopping and review on various web-Qual models (e.g., Agarwal and Kumar 2016; Amjad 2015; Anusha 2014; Ba and Johansson 2008; Jain 2018; khan 2011; lin 2009; ludin and cheng 2014). Thirdly, the performance evaluation of the websites have been least explored by the researchers. And lastly the online banking sector and tourism sector has been reviewed most by the researchers (e.g., Siu and Mou 2005; Santouridis and Trivellas 2009; Goswami 2013; Chen and Kao 2010) on various attributes of E-Servqual

but separate focus is required on the quality perspective of E-commerce websites as there is no grading firm or rating agency for quality assurance of the websites. Hence, to achieve repeated leadership in the online market, it is important to ensure the software quality of e-commerce systems.

Today globalization and liberalization are affecting economies of not only developing but also developed countries. The focus areas for organizations are also changing from profit maximization to maximizing profits through increased customer satisfaction. During past two decades business scenario has changed drastically. Some of the key changes that have taken place in the business are Greater sharing of information with all connected links and customers, Integrated customer driven processes, Quick response to customer's needs, easily accessible information through internet and flexible and efficient service/product customization, increase in use of IT, increased customer knowledge and awareness etc., it becomes a must to deliver the services better than its competitor at agreed price These demands for a continuous effort to learn and validate, modify the existing concepts of service quality. The present paper is an attempt to enhance the understanding of the subject. In this context, the subject of service quality needs a fresh understanding in the current E-business scenario. This study can help to identify the research gaps and thus attempts to provide benefits to practicing managers and researchers.

4.1 Objectives of the study

The proposed study has the following major objectives:

- To study the effect of E-SERVQUAL for measuring service quality and customer satisfaction.
- To examine the effect of customer satisfaction of an ecommerce website on its financial performance.
- To determine the relative contribution of the five dimensions of E-SERVQUAL in influencing customer's quality satisfaction.

4.2 Research Questions

Based on the research gaps identified, the researcher proposed the following questions for the research:

- To what extent does Electronic Service quality attributes affect customer satisfaction of ecommerce websites?

- Does customer satisfaction derived from Electronic service quality of website affect its financial performance?
- Does customer attitude differs towards the website service quality across demographic and psychographic variables?
- What are the reasons behind the dimensions of E-SERVQUAL influencing customer's quality satisfaction?

Section 5: Methodology

5.1 **Scope of Study**

5.1.1 Area of survey: Agra city because Agra being a tier II city accounts for nearly 60 per cent of shoppers combined with tier III cities. And tier I cities have been explored earlier. (Source: IBEF Report 2019).

5.1.2 Target Area:

- Agra city.

5.1.3 Total Population:

- Total population of Agra city that is 1585704 (As per Census 2011 report) (Refer table 2).

5.1.4 Target Population: Population of the city under, 20-34 age (Young adults) is 408886, 35-59 age (Mature adults) is 390628 and 60-74 age (old) is 77526 (Refer table 2).

Category	Age	Urban population of U.P	Age wise %	Agra	Total of Agra City
Population		44495063	100	1585704	1585704
Children	0-9	8519706	3.45	293645	293645
Adolescents	10 to 19	8175174	4.75	388483	388483
Young adults	20-34	14722896	2.78	408886	408886
Mature adults	35-59	10194092	3.83	390628	390628
Old	60-74	2433563	3.19	77526	77526
Mixed	74 & above	449632	5.90	26536	26536

Target population

Table 2: Urban population of UP and Agra city C-13 (Census 2011)

5.2 Nature of the Study: The present study is Descriptive and Analytical. The study is descriptive because it studies the current state of service quality of the ecommerce websites. Proposed study would identify various antecedents of customer satisfaction. The study is analytical because it considers various tools to measure service quality and customer satisfaction. This particular study would help to understand the present scenario and future opportunities of Ecommerce website service quality and also helps to identify its implications on financial performance.

5.3 Sampling Plan

5.3.1 Sample Size Calculation

For customers: Taking statistical approach to calculate sample size (n) of the infinite population, the various quantitative measures to be considered are as follows:

a) Degree of variability of population characteristics or standard deviation (σ)

b) Level of confidence desired or Z value

c) Degree of precision desired in estimating population characteristics (D)

$$\mathbf{n = \sigma^2 Z^2 / D^2}$$

―Assuming relative homogeneity of population‖ Bill Godden Formula

σ = Approximate value of standard deviation of the sample is taken as 1.

Z = Standard normal variation or Z value is taken as 1.96 for 95% confidence level desired

D is taken as 0.1 to ensure high degree of precision.

$$\mathbf{n=1^2(1.96)^2 / (0.1)^2 = 384}$$

Sample size-384

Region/city	Total Target Population	City wise Target Population Percentage of Total Target Population of Agra city	City wise Sample Size (As a Percentage of Total Sample Size)	Sample size of young adults city wise*	Sample size of mature adults city wise*	Sample size of old people city wise*
Agra	799514	100.00	384	179	171	34

Table 3: Total Sample of Agra city (Census 2011)

*****Calculated as per age wise percentage of urban population of Agra city (Refer table 2)

5.3.2 Sampling population

The total population of Agra city 1585704. Percentage of population of individual citiy is calculated (Refer table 2) and the entire sample size of 384 is divided as per the calculated percentage. Then the sample of city is calculated age wise in proportion to the age wise population of Agra as per Census report 2011 (Refer Table 3).

5.3.3 Sampling frame

The sampling frame for the proposed research is the listing of the respondents in the different age bracket of 20-74 in Agra city.

5.3.4 Sample composition

Sample comprises consumers between the ages 20-74 years.

5.3.5 Sampling Technique

The judgmental sampling technique is used to collect information and data from customers. The present study deals with the measurement of service quality of the website and an online user who has used the website three months in advance to the study is the only person who can provide the relevant information which is useful for the particular study.

5.4 Data Collection Instruments

5.4.1 Primary Data Tools

To fulfill the objective of the proposed study primary data will be collected from the customers through questionnaire method. According to Heiman (1998), a pilot study using respondent should have similarities in terms of shape, and features with the actual study respondents. Based on these reasons, the respondent of the pilot study have to meet the same criteria as well as the actual respondents.

5.4.2 Secondary Data

Data will be collected through various magazines, journals, publication of Quality assurance reports, Newspapers, firms' annual financial reports.

5.5 Statistical Techniques for Data Analysis

Relevant analytical tools would be used for analysis.

Section 5: CHAPTERIZATION

The proposed study will contain the following chapters:

- Chapter 1: Introduction
- Chapter 2 – Review of Literature
- Chapter 3 – Research Methodology
- Chapter 4–Analysis and Results Interpretations
- Chapter 5 –Managerial Implications, Conclusion and Direction for Future Research
- References
- Appendix

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